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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/385,020	08/30/1999	SHUNPEI YAMAZAKI	0756-2023	8609

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EXAMINER

NGUYEN, KEVIN M

ART UNIT PAPER NUMBER

2674

DATE MAILED: 11/29/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/385,020

Applicant(s)

YAMAZAKI, SHUNPEI

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The amendment filed on 9/4/2001 is entered. The rejections of claims 1-9 are maintained.

Information Disclosure Statement

The information disclosure statement filed 8/30/1999 and 4/30/2000, which has been placed, in the application file, the information referred to therein has been considered as to the merits.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. **Claims 1, 3 and 5 are also rejected under 35 U.S.C. 102(e) as being anticipated by Koichi (JP 10063204).**

3. As to claims 1, 3 and 5, Koichi teaches the electronic device which includes the liquid crystal 7, three color LED red, green, blue, 3R1, 3G1, 3B1, the light source driving circuit 6 to control the mixing rays from 3-LEDs to produce white display having a satisfactory white balance (see full text).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3 and 5 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Masahiko (JP 09146089).

6. As to claims 1, 3 and 5, Masahiko teaches the liquid crystal display which includes the red LED 3, the green LED 4, the blue LED 5, three color of red, green and blue are mixed on the reflection plate 6, the light diffusion plate 1 by controlling the intensity and the turning on/off of the respective light (see full text). It would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Masahiko teaches the mixing rays from the 3-color LED to produce inherent white light which is introduced into the liquid crystal panel as claimed.

7. Claims 1, 3 and 5 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Koji (JP 08-211361).

8. As to claims 1, 3 and 5, Koji teaches the electronic device which includes an LCD 11, the red LED 15r, the green LED 15g, the blue LED 15b. The diffusion plate 12 (scatterplate), and a PCB 13 corresponding the means of mixing rays of 3-color light LED (see full text). It would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Koji teaches the mixing rays from the 3-color LED to produce inherent white light which is introduced into the liquid crystal panel as claimed.

9. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka (US 5,751,383).

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10. As to claim 1, Yamanaka teaches an electronic device which includes, referring to Fig. 46, a liquid crystal panel 448, the three light sources having the red, green, and blue light-emitting diodes 440, 441, 442 (col. 25, lines 31-32), the mixing unit having Fresnel lens 443, color filter 445, light valve 446, glass coat 447 to form the structure of scatterplate to scatter the light of the three color pixel triplet for producing inherent white light. It would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Yamanaka teaches a structure having the rays emitted from the color separating type light source are refracted by the Fresnel lens 443 so that those rays may pass through the color filter 445, the light valve 446 and the glass coat 447 covering the surface of the light valve 446. Then, the rays fall incident upon the back projection type screen 448 on which an image is reproduced as claimed (see col. 25, lines 31-43)

11. As to claim 2, Yamanaka teaches the applied electronic device is a head mounted display (HMD) (see col. 9, line 49).

12. As to claims 3 and 4, Yamanaka teaches the HMD which includes, referring to Fig. 46, a liquid crystal panel 448, the three light sources having the red, green, and blue light-emitting diodes 440, 441, 442 (col. 25, lines 31-32), the scatterplate having Fresnel lens 443, color filter 445, light valve 446, glass coat 447 to scatter the light of the three color pixel triplet for producing inherent white light. It would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Yamanaka discloses the scatterplate as claimed.

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13. As to claims 5 and 6, Yamanaka teaches the HMD which includes, referring to Fig. 46, a liquid crystal panel 448, the three light sources having the red, green, and blue light-emitting diodes 440, 441, 442 (col. 25, lines 31-32), the scatterplate having Fresnel lens 443, color filter 445, light valve 446, glass coat 447 to scatter the light of the three color pixel triplet for producing inherent white light. It would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Yamanaka discloses the scatterplate as claimed.

14. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka in view of Jacobsen et al (US 6,073,034).

15. As to claim 7, Yamanaka teaches all of the claimed limitations of claims 1-6, except for the active matrix liquid crystal panel (AMLCD). Moreover, Yamanaka teaches many widely different embodiment of the prevent invention may be constructed and be applied to various display device (see col. 26, lines 64-65). However, Jacobsen et al teaches the active matrix liquid crystal panel (see col. 1, lines 24-29). It would have been obvious to a person of ordinary skill in the art at the time of the invention to includes the AMLCD taught by Jacobsen et al in the liquid crystal panel of Yamanaka's system because this allow the user to view the display with high quality image. In addition, it will be understood by those skilled in the art that various changes in form and details may be made therein (see col. 18, lines 10-11 of Jacobsen et al).

16. As to claim 9, Jacobsen et al teaches the electronic device can be used as a wireless mobile telephone, or alternatively (see col. 2, lines 26-30).

17. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka in view of Jacobsen et al as applied to claim 7 above, and further in view of Akins et al (US 6,166,787).

As to claim 8, Yamanaka and Jacobsen teach all of the claimed limitations of claim 7, except for a plurality of inclined surfaces. However, Akins et al teaches, referring to Fig. 7, the first face 70 having a first slope defining a first prismatic angle 80 (see col. 5, lines 25-26). It would have been obvious to a person of ordinary skill in the art at the time of the invention to include the slope surfaces 70 taught by Akins et al in the liquid crystal panel of Yamanaka's and Jacobsen's system because of those skilled in the art will appreciate that other reflective light modulating cell can be employed with present device (see col. 13, lines 19-21 of Akins et al).

Response to Arguments

18. Applicant's arguments filed 9/4/2001 have been fully considered but they are not persuasive.

19. In response to applicant's argument that claim 1 recites "means for mixing rays from the 3-color light emitting diodes to produce white light." This argument is not persuasive because Yamanaka's invention teaches "the rays emitted from the color separating type light source are refracted by the Fresnel lens 443 so that those rays may pass through the color filter 445, the light valve 446 and the glass coat 447 covering the surface of the light valve 446. Then, the rays fall incident upon the back projection type screen 448 on which an image is reproduced." These arguments are not persuasive because Yamanaka's fifth embodiment discloses "the white parallel rays of

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light 206 output from the lighting unit 201 enter the light valve 203 which controls the transmittance of each pixel. The light valve 203 comprises a liquid crystal panel (see col. 17, lines 26-29)." These arguments are not persuasive because it would have been an obvious matter of design choice to make integral of the scatterplate into direct one unit, since such a modification would have involved a mere change in the making integral of a component. A making integral is generally recognized as being within the level of ordinary skill in the art. In re Larson, 144 USPQ 347(CCPA 1965). In addition, it would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Yamanaka teaches many widely different embodiment of the prevent invention may be constructed (see col. 26, lines 64-65).

20. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

22. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 4/30/2001 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on M-F (9:00-5:00), with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

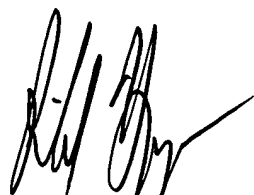
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Examiner
Art Unit 2674

KN
November 13, 2001



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600